

All COR ISO Recommendations

Latent Condition, Seismic and ISS

Friday, October 12, 2012 12:54:02 PM

Type	Rec #	ABU	Unit	Year (I/R)	LC or ISS Question #	LC Question ISS Question Seismic Area	Observation	Recommendation	Resolution	Duc Date	Assigned To	Status
ISS	8846	U&E	COGEN	2012	4.2	<p>Can passive leak-limiting technology be used to limit potential loss of containment?</p> <p>* Blowout resistant gaskets (e.g., spiral wound)</p> <p>* Increasing wall strength of piping and equipment</p> <p>* Maximize use of all-welded pipe</p> <p>* Using fewer pipe seams and joints</p> <p>* Providing extra corrosion/erosion allowance (e.g., Sch. 80 vs. 40)</p> <p>* Reducing or eliminating vibration (e.g., through vibration dampening or equipment balancing)</p> <p>* Minimizing the use of open-ended (bleed or vent), quick-opening valves (for example, quarter-turn ball or plug valves)</p> <p>* Eliminating the use of open-ended (bleed or vent), quick-opening valves (for example, quarter-turn ball or plug valves) in hazardous service</p> <p>* Using incompatible hose connections to prevent mis-connection (e.g., air/nitrogen, raw materials)</p> <p>* Use of round valve handles for open ended quarter-turn valves to minimize potential for bumping open</p> <p>* Improving valve seating reliability (e.g., using system pressure to seal valve seats where possible, using valve seat geometry, valve operations, and flow to eliminate or reduce seat damage)</p> <p>* Eliminating unnecessary expansion joints, hoses, and rupture disks</p> <p>* Use of articulated arms instead of hoses for loading/unloading of hazardous materials</p>	<p>* Appropriate gaskets used according to service/process conditions</p> <p>* Equipment is designed per pipe class to minimize loss of containment from leaks/corrosion</p> <p>* Turbine generator is balanced after assembly to minimize vibration; vibration is monitored</p> <p>* No quick-opening valves in Cogen</p> <p>* Expansion joints, hoses used only when necessary</p> <p>* Use high-pressure or magnetic sight glasses as needed</p> <p>* Glass, plastic or other brittle material not used as material of construction; glass used only as needed for sight glasses</p>	<p>1) Quarter turn valves may be used in critical services and may be inadvertently opened/closed leading to potential shutdown. One such valve has already been identified (air valve for TG800); short-term mitigation is in place and long term mitigation planned for the next shutdown (2017).</p> <p>Review Cogen for similar valves and consider replacing these with round-handled valves to prevent accidental opening/closing.</p>		9/6/2013	Reyes, Donald S.	In Progress

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						* Eliminating unnecessary sight glasses/glass rotameters; use high-pressure/armored sight glasses as needed * Eliminate use of glass, plastic or other brittle material as material of construction * Use of seal-less pumps (e.g., canned, magnetic drive) * Minimizing the number of different gaskets, nuts, bolts, etc. used to reduce potential for error						
Seismic	723	U&E	COGEN	2012		HRSG 1000 transition south side	Possible anchor bolt corrosion where washers are smaller than base plate holes on 3 cols. Pics 1, 2, & 3	Maintenance to remove nuts one at a time and check anchor bolts for corrosion. If not corroded, Maintenance to replace flat washer with ASTM A36 or A516 Gr. 70 plate washer 3" square x 1/4" thick. Otherwise, contact Civil Engineer for further evaluation.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	724	U&E	COGEN	2012		P-4920 A/B/C	Missing one anchor bolt per pump. Pic 4	Maintenance to install one anchor bolt per pump to match existing bolts.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	725	U&E	COGEN	2012		Naico Tank C08681	Missing hold-down wire ropes. Pics 5 & 6	Maintenance to install two wire rope hold-downs per side that will straddle tank roof molding. Match existing wire rope type and size.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	726	U&E	COGEN	2012		Naico Tank C08680	Missing hold-down wire ropes. Pics 7 & 8	Maintenance to install two wire rope hold-downs per side that will straddle tank roof molding. Match existing wire rope type and size.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	727	U&E	COGEN	2012		Naico EliminOx totes	Totes stacked without anchorage to each other. Pic 9	Civil Engineer to determine if hold-downs are needed.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	728	U&E	COGEN	2012		HRSG 2000 transition north & south sides	Possible anchor bolt corrosion where washers are smaller than base plate holes on 1 column each north & south sides. Pics 10 & 11	Maintenance to remove nuts one at a time and check anchor bolts for corrosion. If not corroded, Maintenance to replace flat washer with ASTM A36 or A516 Gr. 70 plate washer 3" square x 1/4" thick. Otherwise, contact Civil Engineer for further evaluation.		9/6/2013	Reyes, Donald S.	In Progress

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Seismic	729	U&E	COGEN	2012		TX BK 452	Missing anchor bolt in NE corner. Pic 12	Civil Engineer to specify post installed anchor bolt.		9/6/2013	Reyes, Donald S.	In Progress
Seismic	730	U&E	COGEN	2012		V-2600/2500/1600/1500	Saddle support not covered and not visible. Pic 13	Civil Engineer to review drawings and evaluate support conditions.		9/6/2013	Reyes, Donald S.	In Progress